SUPERFUND PRELIMINARY CLOSE OUT REPORT

Skinner Landfill Site
West Chester, Ohio

I. INTRODUCTION

This Preliminary Close Out Report, in accordance with "Close Out Procedures for National Priorities List Sites, OSWER Directive 9320.2-09A-P", documents that the U.S. EPA and the Ohio Environmental Protection Agency have completed oversight of all major construction activities for the Skinner Landfill Site (Site). The State of Ohio and the U.S. EPA conducted a pre-final inspection on September 27, 2001, and determined that the Potentially Responsible Parties' (PRPs) contractors have constructed the remedy in accordance with remedial design (RD) plans and specifications. Remedial action consisted of construction of a 10.5 acre landfill cap and groundwater interception system to control contamination from migrating off-site. The Skinner Landfill Superfund site is located in Union Township, Butler County, Ohio. The site is located approximately fifteen miles north of Cincinnati, Ohio near West Chester, Ohio and is comprised of approximately 78 acres located along Cincinnati-Dayton Road.

II. SUMMARY OF SITE CONDITIONS

The site is located in a highly dissected area that slopes from a till mantled bedrock upland to a broad, flat-bottomed valley that is occupied by the main branch of Mill Creek. Elevations on the site range from a high of nearly 800 feet above mean sea level (msl) in the northeast, sloping generally southwestward, to a low of 645 feet msl near the confluence of Skinner Creek and the East Fork of Mill Creek. The natural topography of the site is obscured by piles of solid waste materials.

Both Skinner Creek and the East Fork of Mill Creek are small, shallow streams with low flow water depths averaging less than 1 foot. Both of these streams flow to the southwest from the Skinner Landfill site, toward Mill Creek, which in turn flows into the Ohio River. A third on-site stream, Dump Creek, borders the landfill on the east. Three shallow ponds are also located on the site.

The site is underlain by a relatively thin glacial drift over interbedded shales and limestones of Ordovician age. Groundwater at the site is contained in either the glacial drift aquifer or the bedrock aquifer. The glacial drift ranges from zero to 40 feet thick on the site, and is composed of layer of sand and gravel, and layers of silty to clayey materials. The thickness, composition and permeability of these layers vary greatly over the site, and this complicates the flow of the groundwater on the site. Groundwater also flows through fractures in the bedrock at the site. Nearby residents are connected to the city water system.

Site History and Enforcement Activities

The site was used in the past for the mining of sand and gravel, and was operated for the landfilling of a wide variety of materials from approximately 1934 through 1990. Materials deposited at the Site include demolition debris, household refuse, and a wide variety of chemical wastes. A low area in the center of the Site, referred to as the waste lagoon, was used for the disposal of paint wastes, ink wastes, creosote, pesticides, and other chemical wastes.

In 1976, in response to a fire on the site and reports of observations of a black, oily liquid in a waste lagoon on the Site, the Ohio EPA began an investigation of the Skinner Landfill. Before the Ohio EPA could complete this investigation, the Skinners covered the waste lagoon with a layer of demolition debris, thereby hindering the investigation. Albert Skinner, the site owner at the time, dissuaded the Ohio EPA from accessing the lagoon area by claiming that nerve gas, mustard gas, incendiary bombs, phosphorus, flame throwers, cyanide ash, and other explosive devices were buried at the landfill. This prompted the Ohio EPA to request the assistance of the U.S. Army. Albert Skinner, in the presence of Ohio EPA attorneys and the U.S. Army investigators, subsequently retracted his claims of the presence of ordnance. The U.S. Army and Ohio EPA then dug several trenches into the buried waste lagoon, and found black and orange liquids and a number of barrels of wastes. Subsequently, records searches have been performed by the U.S. Army, and have indicated that there is no evidence of munitions of any sort having been disposed at the Skinner Landfill site.

In 1982, the U.S. EPA conducted a limited investigation of the site for the purpose of scoring the Skinner Landfill site for inclusion on the National Priorities List (NPL). The investigation showed that the groundwater southeast of the buried waste lagoon was contaminated with volatile organic compounds. The Skinner Landfill site was placed on the NPL in December, 1982.

In 1986, the U.S. EPA began a Phase I Remedial Investigation (RI), with the sampling of groundwater, surface water, and soils. A biological survey of the East Fork of Mill Creek and Skinner Creek was also performed. In 1989, the U.S. EPA began the Phase II RI, to further investigate the site groundwater, surface water, soils, and sediments. Overall, more than 400 samples from the site were analyzed in chemical laboratories. The RI resulted in the installation of 39 groundwater monitoring wells, and 33 soil borings. In August 1990, through a legal proceeding, the Ohio EPA closed the site to all further landfilling activities. The Phase II RI was completed in May 1991. The Feasibility Study was completed in April 1992.

The U.S. EPA completed a search for PRPs in April 1983. The results of that search were later supplemented by information requests under CERCLA 104(e), and by administrative depositions held on June 17, 1991. The present site owner, Mrs. Elsa Morgan-Skinner, produced a large quantity of site records at her deposition. As a result of this information, U.S. EPA produced a list of PRPs for the site.

An Record of Decision (ROD) for an interim action operable unit was signed by the Regional Administrator of Region 5, U.S. EPA, on September 30, 1992. The ROD consisted of site fencing, connections to the Butler County public water system for potentially affected users of groundwater, and groundwater monitoring. A Unilateral Administrative Order (UAO) for the performance of the actions required by the interim action operable unit was issued to twenty then-identified PRPs on December 9, 1992. Several PRPs organized the Skinner Landfill PRP group, and this group fully complied with the requirements of the UAO.

The ROD for the final operable unit at the site was signed on June 4, 1993. On March 29, 1994, U.S. EPA entered into an Administrative Order by Consent (AOC) with the Skinner Landfill PRP group for performance of the Remedial Design (RD) of the final remedy. The final design was approved in June 1996. After the design was approved, U.S. EPA initiated an Alternative Dispute Resolution (ADR) convening procedure resulting in a privately-funded agreement to use a neutral party to allocate responsibility for response costs. Almost simultaneously, the Skinner Steering Committee filed contribution lawsuits against most of the PRPs named by U.S. EPA. The Steering Committee moved in the contribution lawsuit for the entry of a case management order which would make the private allocation procedure mandatory for all of the contribution defendants. Most of the defendants agreed to participate in the allocation procedure; others opposed the process. The Remedial Action (RA) at the site could not begin until the ADR allocation procedure was complete. The allocation procedure was complete in April 1999. Special Notice Letters were sent to the PRPs in February 1999, to initiate RA Consent Decree (CD) negotiations. The CD was entered by the federal judge on April 2, 2001.

III. REMEDIAL CONSTRUCTION ACTIVITIES

The primary remediation components discussed in the Record of Decision were:

- construction of a RCRA cap;
- interception, collection, and treatment of contaminated groundwater;
- groundwater monitoring.

Waste Consolidation/Landfill Cap:

As mentioned above, the CD was entered on April 2, 2001. The PRP's contractor, Earth Tech, began site preparation work by setting up support zones and constructing access roads around the perimeter of the site the following week. A pre-construction meeting was held at the site on April 11, 2001, to discuss the project specifics and schedule.

Earth Tech completed landfill surface preparation, which included tree removal between April 9, 2001 and July, 2001. As a result of the Phase II RI, contaminated soil was identified in two areas off-site. The two areas are the Buried Pit soil boring (BP01/BP02) area and the area around well GW-38. The volume of contaminated soil was estimated at 725 and 150 cubic yards, respectively. The contaminated soil was excavated on June 26, 2001 and consolidated under the landfill cap. Confirmation samples were collected and laboratory analyzed to confirm that the excavation met cleanup standards. The excavation areas were backfilled with on-site borrow soil.

The liner installation for the landfill began on July 9, 2001, after the subbase material was placed, compacted, tested, shaped and surveyed for correct elevations. The liner system was installed by Earth Tech's subcontractor, MidAmerica Liner. A geotextile was installed with one foot overlaps. A bentonite mat was placed over the geotextile. A 60-mil PVC liner was installed in panels (pieces), and the panel seams were heat fused according to the manufacturer. A geocomposite drainage layer

was placed on top of the PVC liner and was secured with plastic wire ties and polymeric thread. The liner system was covered with 24 inches of soil and vegetation will be planted to minimize the potential for erosion. During the liner installation, gas vents and peizometers were constructed.

Groundwater Interceptor System:

The Groundwater Interceptor System (GIS) includes a soil-bentonite slurry wall and 3 interceptor trenches with extraction wells. The soil-bentonite slurry wall was constructed by Earth Tech's subcontractor, Pro Terra, between May 21 and June 15, 2001. The interceptor trenches were installed by Pro Terra between July 22 and August 3, 2001. Hilvert and Pope, electrical subcontractor, installed the electrical conduit and made the electrical connections to the GIS system from August 8 through September 27, 2001. Each interceptor trench contains a extraction well which is tied-in to the sanitary sewer located near the site. The groundwater is pumped from the extraction wells and sent to the Butler County POTW for treatment. Groundwater discharged to the POTW will comply with all of the POTW's pre-treatment standards. If at some time in the future pre-treatment is needed to meet POTW requirements, an appropriate technology will be incorporated to treat those parameters that exceed pre-treatment standards. The pre-treatment standards will be specified in the final O&M plan. The Groundwater Interceptor System was started on September 27, 2001.

Monitoring wells were constructed by Earth Tech's subcontractor, Bowser-Morner, between September 4 and September 27, 2001. Groundwater samples are collected from the monitoring wells and laboratory analyzed. The analytical results are used to help determine if the remedy is meeting the required performance standards. Operation and Maintenance will be conducted for the next 30 years.

Institutional Controls:

Efforts are underway to place institutional controls to limit the future use of all areas of the site where remedial construction has occurred. These areas will include the area covered by the cap, any barrier walls, interceptor trenches, extractions wells, etc. The restrictions will prevent the use of the site for any activity which will interfere with the performance of the remedy, or which will result in exposure of contaminants to humans or the environment.

IV. DEMONSTRATION OF CLEANUP ACTIVITY (QA/QC)

The remedial design and the construction specifications for the remedial action were carefully reviewed by U.S. EPA and Ohio EPA staff for compliance with all requirements of the ROD and any applicable plan modifications. The construction QA/QC program utilized throughout the remedial

action was sufficient and enabled the U.S. EPA to determine that the testing results reported were accurate to the degree needed to assure satisfactory execution of the remedial action consistent with the remedial design and the ROD.

V. ACTIVITIES AND SCHEDULE FOR SITE COMPLETION

The following construction activities must be completed by the PRP's contractor before a final inspection is conducted:

Grass Seeding	October 15, 2001
Finalize O&M Plan	October 31, 2001
Demobilization	October 31, 2001
Interim RA Report	November 1, 2001

U.S. EPA can begin deletion of the Site from the NPL on September 30, 2031.

VI. SUMMARY OF REMEDIATION COSTS

Record of Decision Capital Cost Estimate	$ 9,619,000

VII. FIVE YEAR REVIEW

Upon completion of this remedy, hazardous substances will remain on site above levels that allow for unlimited use and unrestricted exposure. Thus, a statutory five-year review will be conducted on March 30, 2003 pursuant to OSWER Directive 9355.7-02, "Structure and Components of Five-Year Reviews" (May 23, 1991) by the U.S. EPA.

Wm. E. Muno

William E. Muno, Director
Superfund Division

9/27/01

Date

PRE-FINAL INSPECTION
NEW PUNCHLIST ITEMS (09-27-2001)

1. Finish Grade landfill cover.
2. Connect Interceptor Trench system to discharge manhole.
3. Drainage controls installation.
4. Fencing.
5. Stabilize slope above Gabion Wall.
6. Relocate Tree Pile.
7. Remove (2) AST's (glue tank disposal completed)
8. Make pump system operational (permanent power, telephone, flow meter, and sampler).
9. Seeding and Mulching.
10. Remove Decontamination Pad.
11. Disposal of excavated soils from Area BP-1/BP-2 (roll-offs).
12. Dispose of drums at Decontamination Pad.
13. Address west seep.
14. Develop and Sample Wells.
15. Extend Piezometers and install covers on the top of the Landfill.
16. Letter to EPA excluding piezometers 13 and 14 from GWMP.
17. Remove the dead tree at the Duck Pond.
18. Remove and dispose of shallow trash at north lobe (stockpiles).
19. Abandon P-3. Re-install P-3. Install GW-06.
20. Complete seeding of berm adjacent to duck Pond.